

# DOCUMENT RESUME

ED 135 241

FL 008 407

AUTHOR Cazden, Courtney B.; Leggett, Ellen L.  
 TITLE Culturally Responsive Education: A Response to LAU Remedies II.  
 PUB DATE Dec 76  
 NOTE 52p.

EDRS PRICE MF-\$0.83 HC-\$3.50 plus Postage.  
 DESCRIPTORS \*Biculturalism; \*Bilingual Education; Bilingual Students; Classroom Participation; \*Cognitive Style; Community Involvement; Cultural Education; Cultural Traits; Educational Improvement; \*Evaluation Needs; Inservice Teacher Education; Interaction; Learning Modalities; Parent Participation; \*Research Needs; \*Sociocultural Patterns; Student Teacher Relationship

## ABSTRACT

Four recommendations for research and educational policy to achieve culturally responsive education are made and discussed: (1) because children differ in sensory modality strength, and the learning of all children in bilingual-bicultural education schools may be depressed in overly verbal environments, all such schools should plan more multisensory instruction; (2) differences in field dependence-independence should be researched; (3) because classroom participation is an indicator of children's engagement and thereby of their learning, and also a valuable learning activity in itself in BBE programs, monitoring of that participation and subsequent planning for change where needed should become a part of formative evaluation procedures in all BBE schools. In a few communities, field research projects of a larger range should be supported, projects in which an ethnographer works with staff and community members on a specific diagnosis of incompatibilities between the interactional styles of community and school, and suggests directions for change and then helps to monitor the results; (4) all school systems should bring the invisible culture of the community into the school through parent participation, hiring and promotion of minority group personnel, and inservice training for the school staff. That inservice training should include both experiential and formal education components along the lines described in the Master Plan for San Francisco. (Author/CLK)

\*\*\*\*\*  
 \* Documents acquired by ERIC include many informal unpublished \*  
 \* materials not available from other sources. ERIC makes every effort \*  
 \* to obtain the best copy available. Nevertheless, items of marginal \*  
 \* reproducibility are often encountered and this affects the quality \*  
 \* of the microfiche and hardcopy reproductions ERIC makes available \*  
 \* via the ERIC Document Reproduction Service (EDRS). EDRS is not \*  
 \* responsible for the quality of the original document. Reproductions \*  
 \* supplied by EDRS are the best that can be made from the original. \*  
 \*\*\*\*\*

ED135241

Culturally Responsive Education:  
A Response to LAU Remedies II

Courtney B. Cazden and Ellen L. Leggett

Harvard University

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

Revised version of a paper prepared for the National Conference on Research and Policy Implications of the Task Force Report of the U.S. Office of Civil Rights: Findings Specifying Remedies for Eliminating Past Educational Practices Ruled Unlawful Under Lau vs. Nichols, Southwest Educational Development Laboratory, Austin, Texas, June 17-18, 1976.

F2008407

(We are grateful to the following people who responded generously and quickly to requests for documents for this review: Carter Collins of NIE; Steven Diaz of the Harvard Graduate School of Education; Roger Rice of the Center for Law and Education; Rudolph Troike of the Center for Applied Linguistics; and Herman Witkin of Educational Testing Service. Responsibility for the views expressed here, however, are ours alone.)

December, 1976

## Culturally Responsive Education: A Discussion of LAU Remedies II

Courtney B. Cazden and Ellen L. Leggett

Harvard University

According to Section II of the "Task force findings specifying remedies available for eliminating past educational practices ruled unlawful under Lau v. Nichols" (Office of Civil Rights, 1975; hereafter referred to as "Remedies"):

The second part of a plan must describe the diagnostic/prescriptive measures to be used to identify the nature and extent of each student's educational needs and then prescribe an educational program utilizing the most effective teaching style to satisfy the diagnosed educational needs. The determination of which teaching style(s) are to be used should be based on a careful review of both the cognitive and affective domains and should include an assessment of the responsiveness of students to different types of cognitive learning styles and incentive motivational styles - E.g., competitive vs. cooperative learning patterns...

Complying with this section of the Remedies requires a decision about what, in addition to language, must be changed in creating Bilingual/Bicultural Education (BBE). The goal is education that will be more responsive to cultural differences among children. Specifically, school systems are asked to consider cognitive and affective aspects of how different children learn so that appropriate teaching styles and learning environments can be provided that will maximize their educational achievement. Whatever the legal purposes that prompted this OCR document, it can be used more broadly to focus attention on issues fundamental to improved education for all children. In rejecting the District Court's previous approval of the Cardenas Plan for Denver, based on a "theory of incompatibilities" between the characteristics of minority children and

the characteristics of typical instructional programs (J. Cardenas, 1974), the Court of Appeals stated:

The clear implication of arguments in support of the courts' adoption of the Cardenas Plan is that minority students are entitled under the fourteenth amendment to an educational experience tailored to their unique cultural and developmental needs. Although enlightened educational theory may well demand as much, the Constitution does not (Center for Law and Education, 1975, p. 55).

While legal arguments continue about what the constitution demands, we address ourselves to issues of "enlightened educational theory".

The assertion in the Remedies that how we teach should be adapted to how children learn is supported by fundamental concepts in anthropology and psychology. In anthropology, the concept of culture includes not only language and a catalogue of visible objects and events but also the tacit knowledge that the members of any community share:

Schools have long been aware of cultural differences, and in recent years have attempted to address them, rather than punish them. Too often the differences of which the school is aware or which even the community is aware are only the most visible, 'high' culture symbols and the most stereotyped conventions. What may be slighted is the 'invisible' culture (to use Philips' 1974 title), the culture of everyday etiquette and interaction, and its expression of rights and duties. Classrooms may be respectful of religious belief and national custom, yet profane an implicit ceremonial order having to do with relations among persons. One can honor cultural pride on the walls of a room yet inhibit learning within them (Hymes, 1976, p. 8).

In psychology, the concept of intelligence "postulates diverse mental abilities and proposes that intelligent behavior can be manifested in a wide variety of forms, with each individual displaying certain areas of intellectual strength and other forms of intellectual weakness" (Stodolsky & Lesser, 1967, p. 562). In their widely cited article,

Stodolsky and Lesser (1967) report research on cultural differences in patterns of mental abilities among first grade children and hold out a vision of eventually being able to maximize children's learning by matching instructional practice to such differences.

How far have we come toward a realization of that vision? Expansion of this section of the LAU Remedies into more detailed recommendations should ideally rest on the following knowledge:

1. That we know how to describe accurately how different individual children learn, because
  - a. There is valid research data that children from identifiable cultural groups overwhelmingly exhibit certain learning styles, or
  - b. We know how to make valid individual diagnoses of individual children in each classroom.
2. Having that information on children, by group or by individual, we know how to vary how we teach in relevant ways.

That is,

- a. We have a repertoire of teaching styles, and
- b. We have research evidence that a match between characteristics of children and characteristics of teaching environments will significantly increase their achievement.

Educational research on these issues is called "aptitude-treatment interaction" (ATI). During the past decade, considerable research has been done in this area, and reviews of the field are available (Berliner & Cahen, 1973; Tobias, 1976). In general, Tobias speaks for the field: "The bulk of the work remains to be done, and the viability of the ATI construct for the illumination of our understanding of instructional

events, as well as for advancing practice to the point where instructional prescriptions can be made, is still to be demonstrated" (1976, p. 63).

This paper reviews selected topics in this research in more detail, first in cognitive style and then in what I have termed "interactional style". In both domains, discussion is limited to dimensions of differences among children where:

1. Evidence exists that individual differences are correlated with membership in particular cultural groups; and
2. Suggestions have been made for how instruction might be adapted to these differences.

Where evaluation data is available on the effects of adaptations on educational achievement, it is presented. Because the paper is focused on implications for formal, school-based education, environmental antecedents of the cultural differences are not discussed. The paper makes suggestions for how school systems may comply with the Remedies, and create more culturally responsive education in the present state of our knowledge.

At the outset, it is important to keep in mind a distinction between universal and particular goals of education. Universal goals are those we expect all children to achieve and we demand that all schools teach. Literacy and mathematical competence are certainly such universal goals, whatever else one might want to include. Particular goals, by contrast, are both more optional and more varied - skilled performance in sports or the arts, for example. This discussion of LAU Remedies II will be limited to its application to universal goals where "the implication of recognizing individual [and cultural] differences is that different instructional strategies must be found which will optimally promote each child's achievement of basic universal skills" (Lesser, 1971, p. 33). Any complete

educational program should also provide rich options for instruction toward more particular and optional goals, but they will not be considered further here.

The paper does not discuss diagnostic/prescriptive measures themselves. But it should be noted that certain aspects of some of the management systems for diagnosing and prescribing children's educational needs, for instance in reading and mathematics, may make culturally responsive education more difficult. In particular, thoughtful attention should be given to these aspects of whatever system is used:

1. The amount and frequency of testing required;
2. The extent to which instruction is excessively individualized, in the literal sense of each child working alone.
3. Cultural bias, or at best cultural meaninglessness, in the materials themselves, especially if they have been produced for a large-scale use over a wide geographical area.

#### Cultural Differences in Cognitive Style

The term "cognitive style" is used by psychologists to refer to "individual variation in modes of perceiving, remembering, and thinking, or as distinctive ways of apprehending, storing, transforming, and utilizing information" (Kogan, 1971, p. 244). There is no theoretically based set of ways of describing such variations. There is only a list of labels for variations that psychologists have studied. One such variation is the contrast in sensory modalities between visual and auditory strength

that may underlie the findings reported by Stodolsky and Lesser above.

Kogan (1971) lists nine other cognitive style dimensions:

field independence vs. field dependence  
 scanning - a measure of how attention is focused  
 breadth of categorizing  
 conceptualizing styles - e.g. analytic vs. thematic  
     categories  
 cognitive complexity vs. simplicity  
 reflectiveness vs. impulsivity  
 leveling vs. sharpening - a measure of assimilation  
     in memory  
 constricted vs. flexible control - susceptibility  
     to distraction  
 tolerance for incongruous or unrealistic experience

Of these nine dimensions, field dependence/independence is the most thoroughly researched. To our knowledge, differences in sensory modality strength and in field dependence are the only two dimensions of cognitive style on which evidence of cultural differences have so far been found. In these two areas, individual differences in cognitive styles do seem to be correlated with membership in particular cultural groups. In addition, suggestions have been made for how instruction might be adapted to these differences, and in a few cases evaluation data on attempted adaptations are available. The two dimensions will be discussed further in turn.

#### Visual vs. Auditory Sensory Modality Strength

Many teachers observe informally that some children seem to learn more through their eyes while other children learn more through their ears. My own experience is probably typical. In 1974-75 I taught a combined first-second-third grade in San Diego. Two of the six first graders were Mexican-American boys who both did very well in beginning reading but seemed to learn in strikingly different ways. Rafael seemed



to learn more through his eyes, remembering with remarkable accuracy how a word looked and where he had seen it. In the game of Concentration -- where pairs of word cards are scattered face down on the table and players take turns trying to find the pairs -- Rafael could beat anyone in the class, child or adult. Alberto, on the other hand, although an exceptional artist, was not particularly good at Concentration. But he had a much easier time attending to the sounds that words are made of, and wrote daily stories with invented spelling to match his Spanish accent - e.g. An tis coner is drragn (In this corner is dragon.) (See Cazden, 1976 for two of Alberto's pictures and accompanying captions.)

Beyond such informal observations, there is considerable research evidence, both experimental and ethnographic, for cultural differences in sensory modality strength. "Strength" refers to some combination of ability and preference which are often hard to separate. Stodolsky and Lesser (1967) gave four "mental ability tests" to middle- and lower-class children from four cultural groups in New York City (Chinese, Jewish, Negro and Puerto Rican) and three groups in a replication study in Boston (Chinese, Irish and Negro). On space conceptualization, a visual strength, the Chinese ranked first, and this superiority found first in New York was completely replicated in Boston. Social class differences within each group affected absolute scores but not the overall pattern, and differences among the groups were greater among lower class children than among middle class children.

Cazden and John (1971) report extensive observations on the visual strengths of Native American children and from many tribes, and Philips (1974, pp. 272-284) adds observations from the Warm Springs

Reservation in Oregon. Kleinfeld (1973) reviews comparable evidence for the same sensory modality strength, which she calls 'figural', in Alaskan Eskimos.

Most recently, John-Steiner and Osterreich (1975) report visual strengths in a study of learning styles among Pueblo children. They told a story to Pueblo and non-Pueblo primary grade children and then asked the children to both retell the story and draw a picture for it. Story retellings were analyzed on such measures as total number of phrases and percent of those phrases derived from text alone (as opposed to pictures); the drawings were rated on two seven-point scales of artistic and cognitive performance. Comparing the verbal and visual scores of each cultural group, the authors conclude that "verbal expression takes second place to visual expression for the Pueblo groups, and that the opposite is true for the non-Indian groups" (p. 121). Some of the children were tested in English; others in Keres or Tano or both. The language retelling affected the absolute verbal scores but not the verbal-visual comparisons. Within the Pueblo group, the "highest drawing scores in this study were obtained by Keresan-speaking children" (p. 170). The authors suggest two reasons for this superiority. All the Pueblo children live in an artistically rich visual environment of pottery, jewelry, dances and religious ceremonies. But, in addition, the Keresan-speaking children, alone among all the groups, attend school in their second, weaker language (English) and thus may "rely heavily upon graphic skills as a significant channel of communication and representation" (p. 171).

John Steiner and Osterreich also gave an "imagery" test to Indian and non-Indian adults. Navajo, Crow and non-Indian men and women enrolled in teacher training programs were asked to write down the images that 8 words such as house brought to mind. Images were classified as visual ("beige-covered house, post fence surrounding it...") or verbal ("a house is a shelter full of love") or both. Crow Indians gave the most visual responses (70%), Navajos next (50%) and non-Indians least (33%).

It is easy to imagine how relative visual strength could be exploited in instruction in reading or mathematics, but the evaluation of controlled experiments so far presents a mixed picture. Bissell, White and Zivin (1971) review two studies in which individual children's modality strength was matched with types of reading instruction. Modality strength was assessed by tests of visual discrimination of letter combinations and auditory discrimination of letters sounds. The relationship between the children's relative scores and sight vs. phonic method of instruction was then analyzed. The results are inconclusive: one study reports that matching helped and the other reports it did not. Whether the weakness is in the assessment of individual differences or instructional design is unclear.

Lesser reports similar attempts to match instruction in mathematics to modality strength. Certain mathematical concepts can be portrayed either by visual means such as graphs or Venn diagrams, or by equivalent words or numerical symbols. Lesser concludes from the few studies to date that "This research is clearer about the destructive effects of mismatching than it is about the constructive effects of matching... The inhibiting effects of mismatching seem well documented; the rational

bases for arranging uniformly successful matches remain to be clarified" (1971, p. 541-2).

It is likely that the educational effects of differences in sensory modality strengths are most significant in the early school years. Whereas adults usually can readily transmit information learned in one modality to the other modalities, children's sensory modalities are not as highly coordinated (Bissell, White & Zivlin, 1971, p. 149). Because of the inconclusive results from attempts at an instructional match, and the dangers of mismatching, our best strategy at the present time seems to be a deliberately multi-sensory curriculum. A detailed example of multi-sensory teaching of the mathematical concept of set (Bissell, White and Zivlin, 1971) is given in Appendix I of this paper.

As Bissell, White and Zivlin point out, "By teaching the concept of a set or any other concept with a multisensory approach, one is not only more likely to reach all the children in a class but also more likely to make each child's learning experience a richer thing" (1971, p. 150). Their recommendation applies to all children, but it applies with greatest force to the children to whom LAU Remedies apply. Schools in general rely too heavily on verbal presentations by teachers and on demands to children for verbal expression of what they have learned. But this overreliance on words for the representation and communication of information is especially unfortunate in classrooms where the ability of children to comprehend or produce the language of instruction is in question, or where children feel conflicts and pressures about their language use. Our first recommendation, therefore, is that enforcement of LAU Remedies should include attention to rich and diverse multisensory modes of instruction.

### Field Dependence vs. Field Independence

Because "the field independence-dependence dimension is unquestionably the most widely known and thoroughly researched" (Kogan, 1971, p. 247), and because there is some evidence that <sup>relative</sup> field dependence is a characteristic of at least some Mexican-American children, the largest single group to whom LAU Remedies apply, it is important to consider this research in some detail.

Research on the dimension of cognitive style called field dependence-field independence began in the late 1950's when Witkin conducted a series of studies investigating individuals' ability to locate their bodies vertically in space when seated in an experimental room that was tilted at an angle (Body Adjustment Test or BAT). Some people were more influenced by the position of the room and located themselves 'vertically' along the axis of the room's inclination. Witkin termed this greater reliance on the surrounding context as field dependency (FD). Other people relied on bodily cues more than visual cues to determine 'vertically' and were thus less influenced by the position of the room. They were labeled field independent (FI). This work prompted further studies investigating aspects of perception other than bodily awareness. Tests include the now well-known Embedded Figures Test (EFT) which requires subjects to find a simple design within a more complex one, and the Rod and Frame Test (RFT) which requires subjects to adjust a rod to a position perceived as vertical within a square frame that is tilted, much like the tilted room task. From these three tests, it is possible to obtain quantitative measures of the extent to which an individual's perception is influenced by, or

more sensitive to, the surrounding field.

During the first decade's research, Witkin et al (1962) report that males are reliably self-consistent in their performance on perceptual tests; females are more field dependent than males; and a person's tendency to be either field dependent or independent remains stable over a period of years, although there is also a developmental trend toward field-independence. That is, an individual's score becomes more field independent with age, but the position relative to others on the FD-FI continuum remains substantially the same.

Around the time of scores on these three perceptual tests, researchers have attempted to describe broader personality characteristics of individuals with more FD or FI cognitive styles. In 1954, Witkin himself co-authored a book entitled Personality through Perception, describing research indicating that FD individuals make more use of social frames of reference than do FI individuals. Other research on personality correlates (reviewed by Witkin & Goodenough, 1976) finds that FD individuals tend to reach agreement more easily in a dilemma where the information given them is ambiguous; are more attentive to social cues, (e.g. in a puzzle task, FD children glance more often at the experimenter's face while FI children glance more often at the experimenter's puzzle); prefer topics with social content and situations involving social interaction more than FI people.

This research has been welcomed by Witkin as showing that the FD-FI dimension of cognitive style pervades many aspects of behavior. In his (in press), et al 1975 review/ Witkin/ says that "cognitive styles cut across the boundaries traditionally used in compartmentalizing the human psyche and help restore it to its proper status as a wholistic entity". In evaluating

this claim, it is important to remember that data relating personality and social behavior to perceptual and intellectual functioning is correlational data. Even when the correlation is statistically significant, it is never perfect, or even close to perfect. Any sample of people will include FD individuals who score high on social characteristics measured in the particular study as well as FD individuals who score low.

Besides the dangers of invalidly stereotyping perceptual and social behavior under one FD or FI label, application of the labels themselves represents a misconstrual of what the test scores signify. Throughout the research literature, people are classified into two groups on the basis of their tendency to use one mode of functioning more than the other on the perceptual tests. It must be remembered that the scores form a continuum from very low to very high. Although we might well agree that the scores at the far ends of the continuum may be clear examples of one or the other cognitive style, we must question the accuracy of these labels for individuals (or, more accurately, for scores) in the middle ranges of the continuum. In studies where two groups of subjects are contrasted on sex, social class or ethnicity, the tendency to label one group as field dependent and the other as field independent is even more suspect. The scores for one group can only be considered more field dependent or more field independent in relation to the scores of the other group; there is no absolute measure of field dependency or independency.

Witkin has himself warned against the danger of stereotyping. In his 1974 book, he stressed the importance of considering individuals as

unique, saying that:

...although to characterize a person as more or less differentiated is to say a great deal about him, it is far from a sufficient account... It is necessary to add a whole series of uniquely individual qualifications to the statement (Witkin, 1974, p. 382).

Even more strongly, in 1975 he later stated:

Because scores from any test of field dependence-independence form a continuous distribution, these labels reflect a tendency in varying degrees of strength, toward one mode of perception or the other...There is no implication that there exist two distinct types of human beings (Witkin et al, in press.

Despite these cautions, the danger continues to exist that each new study will strengthen the stereotypes with the addition of another distinction between "two types of people."

The dangers of stereotyping become compounded by tendencies to consider FI cognitive style inherently better. Ramírez and Castañeda (1974, p. 73) criticize Witkin for placing a higher value on FI than on FD style. This criticism applies to Witkin's 1962 book in which he did stress the positive aspects of field independence, but those views have since been changed (e.g. in his 1975 review). The original higher valuation of an FI style probably resulted from data which showed a developmental trend toward field-independence and thus provided justification for the widespread view that FI is a more mature and adaptive mode of functioning. The changed valuation comes from the realization that the perceptual tests rank individuals on their degree of articulation and differentiation in apprehending the physical world, while subsequent research on personality correlates can be interpreted as showing greater development of social sensitivity and social skills by relatively more



FD individuals. Witkin et al's review (in press) concludes:

These characteristics add up to a set of social skills which are less evident in field-independent people. On the other hand, field independent people give evidence of greater skill in cognitive analyses and structuring than field dependent people. The cluster of characteristics found in field-dependent people and the cluster found in field-independent people each has components which are helpful in dealing with particular situations. The field-dependent and field-independent cognitive styles are thus not inherently good or bad. Their value can only be judged with reference to their adaptiveness in particular life circumstances.

The characterization of Mexican-American children as more field-dependent than Anglo children rests on two studies. Ramírez and Price-Williams (1974) compared the scores on a portable Rod and Frame Test of fourth grade children in Houston, Texas from three cultural groups: Mexican-American children who were Spanish-English bilinguals, Black children in bilingual French-English families from Louisiana, and Anglo children. Scores of both the Mexican-American and Black children were more field dependent than the Anglo children. More specifically, degrees of error in their estimation of verticality were about twice as great. There were smaller but still statistically significant sex differences (girls more field dependent than boys), and no differences in social class within each cultural group. In a larger comparison in Riverside, California by Caravan (reported by Ramírez and Castañeda (1974, p. 78), Mexican-American children in grades K-6 were significantly more field dependent in the Man-in-the-Box test (an instrument similar to the portable Rod and Frame Test).

Ramírez, Castañeda and Herold (1974) report considerable variability on the FD-FI dimension among Mexican-American children, and

relate that variability to different socialization practices in traditional, dualistic and atraditional communities. Although scores for children in even the atraditional community are more FD than Anglo children, the authors wisely suggest that "implementation of experimental model programs for Mexican-Americans in settings different from those in which they were originally developed must be carried out with great caution" (p 431).

Research on the educational implications of the FD-FI dimension is summarized by Kogan as of 1971:

Witkin's analytical-global dimension would appear to be ideally suited for research on the interaction between variables of cognitive style and instructional treatment. Both ends of Witkin's dimension have adaptive properties, though of a distinctly different kind, and it is feasible that education programs could be devised to profit each of the polar types. Unfortunately, no work of this sort has as yet been carried out (p. 253).

In his review of more recent studies of the educational implications of the FD-FI dimension, Witkin/ et al (in press) categorize them according to three questions: how students learn, how teachers teach, and how students and teachers interact. Although these studies deal with education, few take place in regular classrooms.

Studies on student learning have looked at both the cognitive and social aspects of cognitive style. For example, FD students are better able to learn and remember social content and are more affected by social reinforcement and verbal criticism. In concept-attainment tasks, FI students use a more spectator approach, trying to remember the relevant attributes until the irrelevant ones become obvious.

Investigations of the styles used by teachers have focused mainly on social aspects of the FD-FI dimension. They suggest that teachers of different cognitive styles create different learning environments by

preferring contrasting teaching techniques. For instance, FD teachers seem to prefer classroom discussions to lecturing since it allows more interpersonal interaction; they share more responsibility for learning with their students; and they tend to emphasize the social aspects of curriculum content. FI teachers, by contrast, tend to prefer lecturing, assume more of the responsibility for the teaching-learning situation, and emphasize the more cognitive aspects of curriculum content. Because these studies have been conducted in simulated teaching situations in the laboratory, it cannot be assumed that these differences are representative of actual classroom performance. In fact, two studies conducted in actual classrooms found no relation between teaching variables and the teacher's cognitive style.

Two studies of teacher-student relationships found that students and teachers matched on cognitive style tend to regard each other more positively (in answers to questionnaires) than did students and teachers who were not so matched, and FI and FD teachers assigned higher grades (prior to the final exam) to their FI and FD students respectively.

While these findings are of interest, they do not address the most important question: does matching cognitive style of teachers and students result not only in greater interpersonal attraction but also in improved student academic achievement, especially in relation to some universal goal of education? There is no evidence in answer to this question. Witkin includes a brief description of a study of his own in which students of FD and FI teachers did not differ significantly in their test scores at the end of an experimental "minicourse". Although this result does not address the central question, it does

suggest that when students are grouped heterogeneously by cognitive style, the cognitive style of the teacher does not affect average group achievement. The data as presented do not give information on the students' cognitive styles, and it would be of interest to know whether the achievement of individual students who matched their teacher in cognitive style was significantly higher than the achievement of students who did not.

Some suggestions for educational practices that should enhance learning for FD children are simply suggestions for better education in general - e.g., providing more structure in curriculum tasks, and creating more learning situations which allow for interpersonal interaction. They would be generally considered aspects of good teaching. More specific and prescriptive recommendations go beyond the present state of our knowledge. Witkin / et al (in press) concludes their review of available information with extreme caution:

The first and foremost question is whether matching for cognitive style makes for better student learning, and not alone for the greater interpersonal attraction that has been demonstrated to this point. On the one hand, it is possible to see ways in which teacher-student match may have a positive learning outcome. For example, it may well be that the greater interpersonal attraction between teachers and students matched in cognitive style creates a classroom atmosphere conducive to learning...On the other hand, it is equally possible to conceive of negative consequences of matching. As one example, while the interpersonal effects of the discussion approach used by relatively field-dependent teachers may be helpful to learning by field-dependent students, that very approach at the same time minimizes structure from the teacher which field-dependent students seem to need for most effective learning...The possibilities that have been listed reflect the complexity of the relation between cognitive style match-mismatch and student achievement and they provide a strong note of caution against deciding about the desirability of matching before a great deal more is known about the consequences of matching for student learning. An added note of caution

is suggested by the obvious practical problems likely to be encountered in attempting to create classes of students homogeneous in cognitive style and matched in style with their teacher (in press).

Not included in Witkin's review is Ramírez and Castañeda's important proposal for "bicognitive development and educational policy":

Our research on bicultural children led us to the discovery that children who could cope effectively with the demands of two cultures were those children who exhibited some capacity to be able to perform within both field-sensitive and field-independent cognitive styles. This finding led us to posit a concept of bicognition or bicognitive development...The goal that children become more versatile and adaptable to the increasingly complex demands of life in a postindustrial society may be reached by helping them develop the ability to switch cognitive styles - to be "cognitive switch-hitters" - or to draw upon both styles at any given time (1974, p. 153-4).

In implementing this proposal, the cognitive style of each child is assessed through several Child Behavior Observation Instruments designed by the authors. Students are grouped within each classroom according to their cognitive profile: into either an extreme FI group, a middle group, or an extreme F-Sensitive (i.e. FD) group. In addition, the preferred teaching style of each teacher is assessed by means of 2 Teaching Strategies Observation Instruments. Teachers then are trained in the unfamiliar teaching style so that they will be proficient in using both styles in the classroom. They also learn to recognize characteristics of each cognitive style in children. Children begin in one group matched to their cognitive style, and move to another group when the teacher decides they are ready, moving from one extreme group, to the middle group, and finally to the opposite extreme group. Ramírez and Castañeda suggest that as both teachers and students become more flexible in their use of both styles, groupings may become less rigidly defined. It is not

clear what proportion of each school day children would spend in these groups. Ramírez and Castañeda say their approach is "most effective in implementing the cognitive styles component of culturally democratic educational environments and for encouraging development of biconognition in children" (p. 146) but no actual evaluation data is presented. Our second recommendation, therefore, is that the program developed by Ramírez and Castañeda, and the many other research ideas in Ramírez (1975), should be tried and evaluated, but until we have more research evidence it does not seem advisable to make specific recommendations for educational policy on this dimension of cognitive style.

#### Cultural Differences in Interactional Style

Cultural differences exist not only in cognitive information processing habits, but also in the interactional contexts in which people prefer to learn and to demonstrate what they have learned in some kind of performance. These latter differences we call "interactional style." The label can include some of the social correlates of the FD style discussed above. It includes different reactions to cooperative vs. competitive situations mentioned in the Remedies. And it includes considerable ethnographic evidence on childrens' responses to different interaction situations in school and in their home community.

One experimental study (Kagan & Madsen, 1971) has supplemented ethnographic observations that rural Mexican and Mexican-American children are more cooperative and less competitive than Anglo children. Anglo and Mexican-American children 4-5 and 7-9 years old in Los Angeles and Mexican children 7-9 years old in Baja, California were taught to play a game in which only cooperative play allowed pairs of players to win a toy reward.

All the younger children were overwhelmingly cooperative. But among the older children, Mexican children were by far the most effective cooperators, Anglo children least cooperative, and the Mexican-American children in the middle. For example, in frequencies of trials labeled "completely cooperative", Mexican children had 63%, Mexican-American children had 29% and Anglo children only 10%.

The most detailed ethnographic research on the discontinuities that children from minority cultures face in public school classrooms has been done by Philips (1972, 1974) on the Warm Springs Reservation in Oregon. In the public school classrooms on the Warm Springs reservation, teachers use four participant structures:

In the first type of participant structure the teacher interacts with all of the students...And it is always the teacher who determines whether she talks to one or to all, receives responses individually or in chorus, and voluntarily or without choice. In a second type of participant structure, the teacher interacts with only some of the students in the class at once, as in reading groups. In such contexts, participation is usually mandatory, and each student is expected to participate or perform verbally, for the main purpose of such smaller groups is to provide the teacher with the opportunity to assess the knowledge acquired by each individual student...

A third participant structure consists of all students working independently at their desks, but with the teacher explicitly available for student-initiated verbal interaction, in which the child indicates he wants to communicate with the teacher by raising his hand, or by approaching the teacher at her desk. In either case, the interaction between student and teacher is not witnessed by the other students in that they do not hear what is said.

A fourth participant structure, and one which occurs infrequently in the upper primary grades, and rarely, if ever, in the lower grades, consists of the students being divided into small groups, which they run themselves though always with the distant supervision of the teacher, and usually for the purpose of so-called "group projects." (Philips, 1974, pp. 377-378).

By contrast with non-Indian children, Philips found the Indian children reluctant to participate in the first two structures, large group and small group recitations, which were the most frequent in the classrooms, but more talkative than non-Indian children in the last two contexts of student-initiated talk with the teacher and student-led group projects.

Philips explains these cultural differences as caused by sociolinguistic interference between participant structures in the school and in the children's home and community. In their homes, Indian children learn by a combination of "observation, which of course includes listening; supervised participation; and private self-initiated self-testing."

In summary, the Indian social activities to which children are early exposed outside the home generally have the following properties: 1) They are community-wide, in the sense that they are open to all Warm Springs Indians; 2) there is no single individual directing and controlling all activity, and to the extent that there are "leaders," their leadership is based on the choice to follow which is made by each person; 3) participation in some form is accessible to everyone who attends. No one need be exclusively an observer or audience, and there is consequently no sharp distinction between audience and performer. And each individual chooses for himself the degree of his participation during the activity...

This process of Indian acquisition of competence may help to explain, in part, Indian children's reluctance to speak in front of their classmates. In the classroom, the process of acquisition of knowledge and demonstration of knowledge are collapsed into the simple act of answering questions or reciting when called upon to do so by the teacher, particularly in the lower grades (Philips, 1972, pp. 387-8 and 390).

Other ethnographic reports suggest that the difficulties felt by the Warm Springs children in teacher-dominated recitations are felt by



other minority group children as well. Boggs (1972) reports that Hawaiian children participate volubly in choral responses, and individually volunteer information to teachers when they sense her receptivity, but become silent if called on by name. Dumont (1972) contrasts two Cherokee classrooms - one in which children are silent and one in which children talk excitedly and productively about all their learning tasks. In the silent classroom, teacher-dominated recitations fail. In the classroom where children are engaged, they have choices of when and how to participate, and small group projects apart from teacher domination are encouraged.

Combined, these observations suggest that children from several minority groups are less apt to perform on demand when asked a question individually in a large group, and more apt to participate actively and verbally in group projects and in situations where they can volunteer. In Philips terms, there is an incompatibility between the children's communicative competence and what is entailed in "getting the floor" in most classrooms".

More accurate differentiation among the interactional styles of children in various cultural groups must wait "closer examination of the extent to which [they] differ and/or are the same in their classroom behavior, of the ways in which their behavior is or is not in some way related to different and or similar experiences outside the classroom, and of the extent to which they are as different from one another as all of them are from the white middle class" (Philips, 1974, p. 122).

Even in a more multisensory curriculum, verbal participation in classrooms is important for all children as one indicator of engagement as well as one kind of demonstration to the teacher of what has been learned. For bilingual children, verbal participation in either language is further important as a learning activity in itself. Class-

room environments should be designed to maximize that participation on educationally relevant topics. These generalizations about cultural differences in interactional style also underlie our concern, expressed in the introduction, about the excessive amount of testing and degree of individualization in some management systems for diagnosing and prescribing children's educational needs.

Consideration of such cultural differences in interactional styles requires that the concept of diagnosis and prescription be applied not only to children but to classroom learning environments themselves. Unfortunately, we do not yet have descriptive studies of classroom dynamics in BBE programs, much less have evaluation reports of deliberate attempts to change participant structures to maximize children's engagement and thereby their learning. Hopefully, some of the research projects funded by NIE's multicultural/bilingual division (NIE, 1976) will include such work. Coburn (1975), for example, promises an important attempt to incorporate ideas on the social context of speech from Philips' research into the Teachers Manual which will accompany reading and language arts materials created in and for Indian communities in the Pacific Northwest.

Both the problem of cultural differences in interactional styles and a potential solution are highlighted by Report V of the Mexican American Education Study of the U.S. Commission on Civil Rights (1972; also Jackson & Cosca, 1974) which reports observations of teacher-student interaction in 494 elementary and secondary school classrooms (not BBE programs) in California, New Mexico, and Texas. The report is a damning document:

Teachers praised or encouraged Anglos 35% more than they did Chicanos, accepted or used Anglo's ideas 40% more than they did those of Chicanos, and directed 21% more questions to Anglos than to Chicanos. Thus, Chicanos in the Southwest receive substantially less of those types of teacher behavior presently known to be most strongly related to gains in student achievement (Jackson & Cosca, 1974, p. 227).

And this in classrooms which had been selected from only those schools with no previous record of civil rights violations or investigations, and in which teachers were aware that an observer from a federal civil rights agency was present. Clearly this situation, which is probably all too typical of schools with minority group children, must be changed, and it is unlikely in view of all the above research that simply trying to change teachers' reinforcement patterns will suffice. In the conclusion of her study of the Warm Springs children, Philips comments on this Commission on Civil Rights report:

The orientation of the Commission Report is such that cultural differences of the sort considered [here] are not dealt with in attempting to account for the disparities discussed. The impression is given that the disparities are due to what is typically referred to as discrimination. But even where teachers are well-intentioned, the results are similar, because the minority students' efforts to communicate are often incomprehensible to the teacher and cannot be assimilated into the framework within which she operates. The teacher, then, must be seen as uncomprehending, just as the students are. And it is primarily by virtue of her position and her authority that the students and not the teacher come to be defined as the ones who do not understand (1974, p. 311-12).

We agree that the teachers in these SW classrooms are not discriminatory in intent; but their teaching style becomes discriminatory in effect.

Since children's degree of participation is so obvious to teacher and observer alike, no one has to wait for formal research results before attempting change. Monitoring cultural as well as individual differences in children's participation should be a continuous part of the formative evaluation component of any BBE program. Where participation is low, teachers and supporting personnel (both professional and community) must diagnose the classroom learning environment (not the children), try alternative participant structures in the light of the general research reviewed above and then monitor the results. This is part of what Hymes (1976) means by "ethnographic monitoring," and there is probably no more powerful way to create culturally responsive education.

In a simple and general way, such monitoring can and should be done in any school system right now. A more complex version, in which a trained ethnographer studies interaction patterns in a particular community and then works with the school staff and advisory community group in planning change, should be supported as field research projects in a few sites. See Sherzer (1975) for extensive discussion of the need for such research. There are to-date no examples of situations in which information like Kagan and Madsen's on cooperation, or Philips' on participant structures, is collected and then fed back in to the design of school learning environments in that particular community.

Our third recommendation includes both short and long range efforts to change interaction patterns in BBE classrooms to maximize children's engagement and thereby their learning: effective immediately, classroom monitoring; in the long range, community-specific ethnographic

field research and application.

### Staff Selection and Training

The most important factor in achieving culturally responsive education is the school staff. They create the learning environments in which children succeed or fail. Because "culture" is so largely a matter of implicit knowledge, it is not sufficient for Anglo teachers to take formal courses on non-Anglo language and culture. The "Proposed Approach to Implement Bilingual Programs" prepared by the National Puerto Rican Development and Training Institute (n.d.) is very clear on this point. Accepting the importance of ethnic foods, festivals and courses on cultural history, they insist:

But this is a limited interpretation of the concept of culture. What seems to be forgotten is that culture is acquired by direct, frequent, varied participation and experience in all aspects of the life of a group of people. A very large part of this acquisition occurs outside of the learner's awareness. It follows that culture in this deep sense cannot be taught in culture classes.

Culture can only be "taught" or transmitted if special efforts are made to incorporate into the school, its curriculum, its staff and activities as many aspects of possible of the life of the cultural group to which the learner belongs (p. 30, quoted in part in *Aspira* of New York, Inc. et al vs. Board of Education of the City of New York et al, p. 15).

Teachers as well as children can only learn in this way.

Three changes in staffing patterns can each contribute to bringing the minority children's culture into the school. First, parents and other community members can participate in all aspects of the school program, including direct work with children. B. Cardenas gives an example from the Edgewood School district in San Antonio:

A cultural responsiveness permeates the Edgewood project. You may not see the Aztec sign in every classroom, but you do see the relationship between child and teacher as a very culturally relevant thing. You do see a culturally oriented learning style being respected. You do see parents in the classroom, and parents are transmitters of culture (1972, p. 21).

John Stein and Osterreich (1975) give many examples of parent, grandparent and other community participation in Pueblo classrooms.

Second, there must be a plan for hiring and promoting school personnel who are members of the children's cultural group. As the Cardenas plan for Denver says, "at least a portion of this staff must be reflective of the characteristics of the minority child. Teachers who are members of minority groups have the highest propensity for understanding and responding to the characteristics of minority children" (J. Cardenas, 1974, p. 25). It can be argued that this "propensity" may not be automatically reflected in classroom performance. For instance, in the U.S. Commission on Civil Rights study, the disparity between their praise and encouragement to Anglos vs. Chicano students was greater for Spanish-surnamed teachers than for Anglo teachers (Jacobson & Cosca, 1974, p. 225). But this was in programs that didn't pretend to be either bilingual or bicultural, and name alone is an imperfect indicator of cultural identification. Note that here we are arguing for the hiring of minority group staff on grounds of educational relevance. Such arguments are separate from, and in addition to, other arguments on grounds of affirmative action.

Third, there must be inservice education. Staff development needs will be different for teachers who are or are not members of the children's culture. Our discussion is focused on the needs of Anglo staff. See the Handbook for Staff Development Workshops in Indian Education (Center for

Applied Linguistics, 1976) for detailed suggestions for staff development of Native American personnel which could be adapted for other groups.

For Anglo teachers, inservice education must include first-hand experience in children's community and with the children's home culture, and the nature of that experience must be designed and implemented by some joint group of professional and community people. More than ten years ago, Landes (1965) describes an "anthropology and education program for training teachers" at Claremont Graduate School which was based on "knowing" as well as "knowing about":

In the American schools, emphasis is laid primarily on words to represent all the reality comprehended by men: ideas, values, skills, creations, details of knowledge, teachers, and the beneficiaries of teaching - that is, the pupils and the community. But heavy use of this prime tool can fail educators in their goal of attuning instruction of actual processes of learning. This happens when educators talk more about pupils than with them and their families. Separateness from the objects of discussion forfeits the experiences words should mirror (1965, p. 64).

This is not to say that "knowing about" is of no value; rather that it must be integrated with experiential forms of more direct "knowing" as well.

Such a requirement of direct experience is included in the Recommendations for the Implementation of the Guidelines for the Preparation and Certification of Teachers of BBE Through Inservice Training (Center for Applied Linguistics, 1974). They say, in part:

That various 'cultural' activities or experiences be included as sessions in any inservice course...

That teachers be involved in community affairs where they interact with persons of the 'other' cultures...

That during inservice training teachers be provided with genuine experiences within the community, especially with minority groups of the same origin as the students.

Opportunities for voluntary natural interaction in community activities are to be provided on an ongoing basis, with follow-up sessions for discussion of observations and questions...

The most detailed plan to date for what a school system must do to conform to the LAU decision is the Master Plan for BBE in San Francisco developed by the Center for Applied Linguistics (CAL) and the Citizen's Task Force on Bilingual Education (1975). Part Four of that plan is on Training Program Development. The modes of training described include "Action Training" such as observation and community visitation, and "Formal Training Types" such as workshops and seminars which include explicit requirements for the participation of community members. One sample module of training session development is given in detail (pp. 23-38). The overall goal of the module is "To increase the competency of fifth grade classroom staff to teach the interdisciplinary curriculum unit on 'Politeness in language and society in the Phillipines and the U.S.' and to integrate the unit into the total development of the child" (p. 32). Because this training module is related to general cultural differences in interactional styles as well as to specific curriculum content, it is included as Appendix II of this paper. Note particularly the participation of community members (e.g. 1 for every 15 participants for certain workshops) who provide for the teacher participants both information and opportunities to practice the appropriate verbal and nonverbal behavior. Griffin, one of the CAL staff members who worked on the San Francisco plan, proposes a combination of research, inservice education and curriculum development:

If we take as given that the above three kinds of social factors sociology of language; ethnography of speaking and pragmatics need to be taken into account in consideration of language in a BBE program,



how can it be done?...The answer seems to be to generate a subject area in the curriculum that is "bilingualism"...A cooperative effort by teachers, parents and researchers can prepare the course content during a unique type of adult education. Such an educational setting is about the only chance. That most of the adults will have ever had to experience the bilingual-bicultural learning that they plan for the children. (We at CAL were surprised that the San Franciscans had not considered that choice and combination of language in staff training and community meetings could be a matter of "practicing" what the program was "preaching" for the children (Griffin, 1976, pp. 20-21).

If reminder is needed about what happens when a well-intentioned school administrator tries to do some inservice education on his own, Picket at the Gates (Fuchs, 1966) reports a true story. A principal of a school largely Black and Puerto Rican, who "had been reading a great deal concerning the characteristics of children in depressed areas" (p. 6), found out that he would have fifteen new white teachers in the fall. Hoping to help them, he wrote a letter to the faculty, with a copy to the PTA president, sharing his "facts" about the children and their families. As we would now expect, the parents reacted strongly, demanding his removal. Thus, symbolically at least, the "pickets at the gates."

This is a story from the mid-1960's, and we may feel sure we have grown in cultural sensitivity in the intervening ten years. But we still sorely need case studies of successful models of inservice bicultural education. Our fourth and final recommendation is that in-service education along these lines be required and case studies of successful models be accumulated and widely distributed.

### Summary

The concept of culturally responsive education rests on fundamental concepts of the nature of culture and the nature of intelligence and is a very important part of the LAU Remedies. Four recommendations for research and educational policy to achieve culturally responsive education have been made:

1) Because children differ in sensory modality strength, and the learning of all children in BBE schools may be depressed in overly verbal environments, all such schools should deliberately plan more multisensory instruction.

2) Because the educational implications of differences in field dependence-independence have not yet been evaluated, this is an important topic for research.

3) Because classroom participation is an indicator of children's engagement and thereby of their learning, and also a valuable learning activity in itself in BBE programs, monitoring of that participation and subsequent planning for change where needed should immediately become part of formative evaluation procedures in all BBE schools. In a few communities, larger range field research projects should be supported in which an ethnographer works with staff and community members on a specific diagnosis of incompatibilities between the interactional styles of community and school, suggests directions for change and then helps to monitor the results.

4) All school systems should bring the invisible culture of the community into the school through parent participation, hiring and promotion of minority group personnel, and in-service training for the school staff. That inservice training should include both experiential and formal education components along the lines described in the Master Plan for San Francisco.

Case study descriptions of successful inservice programs should be accumulated and distributed widely.

## References

- Berliner, D.C. & Cahen, L.S. Trait-treatment interaction and learning. In F.N. Kerlinger (Ed.). Review of research in education I. Itasca, Ill.: F.E. Peacock (for AERA), 1973, Pp. 58-94.
- Bissell, J., White, S. & Zivin, G. Sensory modalities in children's learning. In G.S. Lesser (Ed.) Psychology and educational practice. Glenview, Ill.: Scott, Foresman, 1971. Pp. 130-155.
- Boggs, S.T. The meaning of questions and narratives to Hawaiian children. In C.B. Cazden, V.P. John & D. Hymes (Eds.). Functions of language in the classroom. New York: Teachers College Press, 1972. Pp. 299-327.
- Cardenas, B. It's a circle for everybody to be involved in. Colloquy, June, 1972, 18-23.
- Cardenas, J.A. An education plan for the Denver Public Schools. San Antonio: National Education Task Force de la Raza, 1974. Excerpts reprinted in Center for Law and Education. Bilingual-bicultural education: A handbook for attorneys and community workers. Cambridge, Mass.: author, 1975, pp. 8-19.
- Cazden, C.B. How knowledge about language helps the classroom teacher, or does it: A personal account. The Urban Review, 1976, 9, 74-90.
- Cazden, C.B. & John, V.P. Learning in American Indian children. In Wax, M.L., Diamond, S. & Gearing, F.O. (Eds.). Anthropological perspectives in education. New York: Basic Books, 1971, pp. 252-272.
- Center for Applied Linguistics. Recommendations for the Implementation of the Guidelines for the Preparation and Certification of Teachers of BBE Through Inservice Training. Washington, D.C., author, 1974.
- Center for Applied Linguistics and Citizens' Task Force on Bilingual Education. A master plan for bilingual-bicultural education in the San Francisco Unified School District, Part 4, 1975.
- Center for Applied Linguistics. Handbook for staff development workshops in Indian education. Washington, D.C.: author, 1976.
- Center for Law and Education. Bilingual-bicultural education: A handbook for attorneys and community workers. Cambridge, Mass.: author, 1975.
- Coburn, J. Proposal for 1976 Northwest Indian Reading and Language Development Program. Portland, Oregon: Northwest Regional Educational Laboratory, 1975.
- Dumont, R.V. Jr. Learning English and how to be silent: Studies in Sioux and Cherokee classrooms. In C.B. Cazden, V.P. John & D. Hymes (Eds.). Functions of language in the classroom, New York: Teachers College Press, 1972, pp. 344-369
- Fuchs, E. Pickets at the gates. New York: The Free Press, 1966.

- Griffin, P. Social factors: Subject matter for language development. Paper presented at conference on "Language development in a bilingual setting" sponsored by the Multilingual/Multicultural Materials Development Center, California State Polytechnic University, Pomona, California, March, 1976.
- Hymes, D. Ethnographic monitoring. Paper prepared for the symposium "Language Development in a Bilingual Setting," Multilingual/Multicultural Materials Development Center, California State Polytechnic University, Pomona, Calif., March, 1976.
- Jackson, G. & Cosca, C. The inequality of educational opportunity in the Southwest: an observational study of ethnically mixed classrooms. American Educational Research Journal, 1974, 11, 219-229.
- John-Steiner, V. & Osterreich. Learning styles among Pueblo children. Final Report HEW: NEG-00-3-0074. Albuquerque: Univ. of New Mexico, 1975.
- Kagan, S. & Madsen, M.C. Cooperation and competition of Mexican, Mexican-American and Anglo American children of two ages under four instructional sets. Developmental Psychology, 1971, 5, 32-39.
- Kleinfeld, J.S. Intellectual strengths in culturally different groups: An Eskimo illustration. Review of Educational Research, 1973, 43, 341-359.
- Kogan, N. Educational implications of cognitive styles. In G.S. Lesser (Ed.) Psychology and educational practice. Glenview, Ill. Scott, Foresman, 1971, pp. 242-292.
- Landes, R. Culture in American education. New York: Wiley, 1965.
- Lesser, G.S. Matching instruction to student characteristics. In G.S. Lesser (Ed.) Psychology and educational practice. Glenview, Ill.: Scott, Foresman, 1971, pp. 530-550.
- National Puerto Rican Development and Training Institute, Inc. A proposed approach to implement bilingual education programs: Research and synthesis of philosophical, theoretical and practical implications. New York: author, n.d.
- National Institute of Education. Multicultural/Bilingual Division Fiscal Year 1976 Program Plan. Washington, D.C.: author, February, 1976.
- Office of Civil Rights. Findings specifying remedies for eliminating past educational practices ruled unlawful under Lau vs. Nichols. Washington, D.C.: HEW, 1975. Also reprinted in The Linguistic Reporter, 1975, 18, (2).
- Philips, S.U. Acquisition of rules for appropriate speech usage. In C.B. Cazden, D. Hymes, V.P. John (Eds.). The functions of language in the classroom. New York: Teachers College Press, 1972, pp. 370-394.
- Philips, S. The invisible culture: Communication in the classroom and community on the Warm Springs Indian Reservation. Unpublished doctoral dissertation, University of Pennsylvania, 1974.

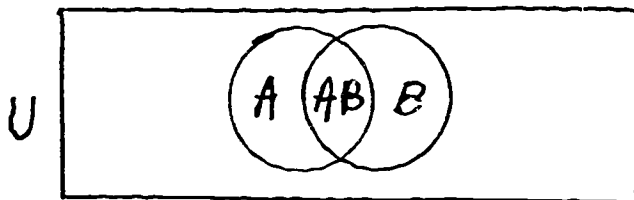
- Ramírez, M. (Chairperson). Reading strategies for different cultural and linguistic groups. NIE Conference on Studies in Reading, Report of Panel 9. Washington: NIE, 1975.
- Ramírez, M. III & Castañeda, A. Cultural democracy; Bicultural development and education. New York: Academic Press, 1974.
- Ramírez, III, M., Castañeda A. & Herold, P.L. The relationship of acculturation to cognitive style among Mexican-Americans. Journal of Cross-Cultural Psychology, 1974, 5, pp. 424-433.
- Ramirez, III, M. & Price-Williams, D.R. Cognitive styles of children of three ethnic groups in the United States. Journal of Cross-Cultural Psychology, 1974, 5, pp. 212-219.
- Sherzer, J. Ethnography of speaking. Paper prepared for Bilingual Symposium, Linguistic Society of America, San Francisco, December, 1975.
- Stodolsky, Susan S. & Lesser, G. Learning patterns in the disadvantaged. Harvard Educ. Rev., 1967, 37, pp. 546-593.
- Tobias, S. Achievement treatment interactions. Review of Educational Research, 1976, 46, pp. 61-74.
- U.S. Commission on Civil Rights. Mexican American educational study, Report V. Washington: Supt. of Documents, 1972.
- Witkin, H.A. & Goodenough, D.R. Field dependence and interpersonal behavior. Princeton, N.J.: Educational Testing Service, Research Bulletin, 1976.
- Witkin, H.A. et al. Personality through perception. Westport, Conn.: Greenwood Press, 1972 (originally pub. 1954).
- Witkin, H.A. et al. Psychological differentiation. Potomac, M.D.: Erlbaum, 1974 (originally published 1962).
- Witkin, H.A., Moore, C.A., Goodenough, D.R. & Cox, P.W. Field-dependent and field-independent cognitive styles and their educational implications. Review of Educational Research, in press.

## Appendix I

Presentation of the concept of a set in three sensory modalities  
(from Bissell, White & Zivin, 1971, pp. 149-150.)

For example, let us suppose that a teacher wants to teach the mathematical notion of a set. A verbal description of a set as a well-defined collection of objects might include a discussion of the idea of a set in its common, everyday usage, where it implies a recognition of some common property possessed by a group of objects. We speak of a set of dishes, a set of stamps, a set of books, and the like. Eliciting similar examples from students would be part of a verbal presentation of the notion of a set.

A visual description of the concept might include the following diagrammatic representation:



Here U is a geometric representation of the set of all children's books, A is the set of Mary's books, and B is the set of books belonging to Mary's brother, Tom. The area AB represents all the books shared by Mary and Tom, and is referred to as the intersection of sets A and B.

The kinesthetic modality might be more effective than the verbal or the visual modality for teaching the concept of a set to some children. Thus, each child might be given three shoelaces and asked to make a circle out of each one. He might also be given nine plane geometric shapes, of which three are triangles, three circles, and three squares. Each of the same-shaped figures is a different color, so that, for example, there is a red triangle, a green triangle, and a blue triangle. The children might then be asked to categorize the figures and place the different categories within the shoelace outlines. Let us assume that one child groups the objects into three categories, according to shape, having created a set of all triangles, a set of all circles, and a set of all squares. Another child might group the objects into categories on the basis of color, creating a set of all red shapes, one of all blue shapes, and one of all green shapes. This manipulating of objects in discovering mathematical concepts such as the notion of a set enables children to represent these concepts to themselves through actions. By teaching the concept of a set or any other concept with a multisensory approach, one is not only more likely to reach all the children in a class but also more likely to make each child's learning experience a richer thing.

## Appendix 2

Sample Module of Training Session development  
 (From A Master Plan for Bilingual-Bicultural Education in the San Francisco  
 Unified School District prepared by the Center for Applied Linguistics and  
 Citizens' Task Force on Bilingual Education, 1975.)

2. Sample Module of Training Session development following system.

\*Refer to numbered flow chart, pages 24 to 26.

Input 1.

Objective Addressed: All instructional staff members will evidence particular awareness of the curriculum section specific to the level of their students and the curriculum section their students will enter at the next level.  
 (Objective C of Goal 3 of Unit 3 of Installment #4.)

Input 2.

Implementation plan indicates that all fifth grade BBE classroom staff members dealing with Pilipino students will be aware that an inter-disciplinary unit of the language arts and the social studies curricula



involves learning about and using the methods that Pilipino languages and English use for polite requests among peers, and between status different conversational partners.

Input 3.

All fifth grade classroom staff members must know

- a. the function of politeness in both cultures,
- b. the language structures used for requesting in various styles in both cultures,
- c. the relevance of language usage lessons to BBE program students in terms of language development, cognitive development relative to social studies and affective development relative to acceptance in bicultural settings,
- d. the relevance of the language structures and the functional cultural patterns to elements in the 6th grade curriculum,
- e. methods for teaching language arts and social studies to fifth grade students,
- f. learning patterns of the Pilipino and other children in the class as a function of culture and personality
- g. methods to develop specific performance objectives for individual students relevant to this element in the curriculum,,
- h. methods to develop unified lesson plans to accomplish these activities,
- i. methods to locate materials for assessing reliably student performance and for re-exposing those students in need,
- j. method to locate materials and personnel needed to accomplish instruction.

The sequencing decisions reveal that

- a. although all fifth grade classroom staff should have some competency in all ten areas eventually, at present the tasks can be divided among the personnel in each given fifth grade classroom
- b. specific training sessions here should build on and review prior more general training sessions that involve competencies c, e, f, g, j, as listed above.

Procedure 13

The specific content for this training session should include:

- a. An ethnographic presentation of the range of politeness and its relevance to other cultural aspects in both societies.
- b. An overview of the special politeness particles, intonation contours and sentence structures used in the relevant Pilipino languages for (polite) requesting.
- c. An overview of the special words, whimperative structures, modal verbs and sentence structures used in English for (polite) requesting.
- d. An overview of the place of (b) and (c) in the language arts curriculum for both languages in grade 6.
- e. Instruction in devising appropriate lesson plans, activities, and in using available materials.

f. Review of training sessions relevant to competencies

c, e, f, g, j above, in application to this element in the curriculum.

Procedure 14 - 21

\*Participants shall be members of fifth grade instructional teams

- a. who have not before taught this element in the curriculum.
- b. and/or who have encountered difficulty with it.
- c. and/or who show a need for more exposure to linguistic and ethnographic information about the Pilipino or American English systems.
- d. and/or who evidence lack of understanding of the relation of language arts and social study curriculum parts to the sequential development of the students.
- e. and/or who evidence difficulty in planning and implementing lessons and assessment of students.
- f. and who are competent in the language of instruction used for the training session.
- g. and/or for whom language support can be provided.
- h. and who have attained criterion level at competencies c,e,f,g,j as listed in Input 3, above.

\*Arrangements are made to provide the participant teachers with compensatory time and/or credits and/or other motivational incentives for participating.

\*The mode of training:

- a. Lecture and discussions on ethnographic and linguistic material.
- b. Workshop I with community participation to consider specific instances of use of polite requests in both cultures.
- c. Workshop II for devising lesson plans, activities, and materials.
- d. Lecture and discussion relating this material to rest of curriculum and to other competencies of instructional staff.
- e. Follow-up supervisory support for implementation of plans in classroom and for extension to other elements in curriculum.

\*Time span: 1 month, excepting long-term assessment and support.

\*Participant time required: 15 hours.

\*Training session resources

\*BBE program staff and outside consultants to training staff for pre-training activities and for implementing and evaluating, including:

- a) an ethnographer
- b) a linguist
- c) community members (1 from each community for every 15 participants).

\*An institution who can supply an ethnographer, a linguist, and community members, and the capability to train in the areas noted negotiates a contract to work with the BBE training staff to be fully responsible for developing and implementing a and b in Procedure 22 - 24 and to be participants in developing c, d, e therein.

Procedure A - 11 to End:

\*The training team will

- a. devise specific goals and objectives.
- b. develop the necessary specific information (including those based on site observations), and
- c. engage in pre-training activities and training activities.

\*The work of the outside resources will include:

- a. Preparing the ethnographic and linguistic materials including sufficient attention to the varieties of the Pilipino and American culture and language in San Francisco.
- b. Preparing the consultants who will be on site at the training session (the ethnographer, the linguist, the community members) to communicate successfully with the staff member participants.
- c. Assisting the BBE program staff to develop the application workshop (II) and the final lecture-discussion (c and d in Procedure 22 - 24, above).
- d. Developing a system for language arts and social studies supervisory personnel to use for follow-up support.

e. Developing the systems for assessment and evaluation.

\*Sample of the goals, objectives, implementation plan, and evaluation of the session.

\*Overall goal: To increase the competency of fifth grade classroom staff to teach the interdisciplinary curriculum unit on "Politeness in language and society in the Philippines and the U.S." and to integrate the unit into the total development of the child.

\*Objectives: Activity (a) and (c) in Procedure 22 - 24 above.

- a. The participants will understand politeness as a part of the cultural system of the Philippines.
- b. The participants will understand politeness as a part of the cultural system of the United States.
- c. The participants will understand the similarities and differences regarding politeness between the two cultural systems.
- d. The participants will understand how an action is evaluated as polite or impolite in each cultural system.
- e. The participants will understand what situations call for what degrees of politeness in each cultural systems.
- f. The participants will understand the short and long term effect of polite and impolite actions in each culture.
- g. The participants will understand the enculturating process relevant to politeness that operates on new members of each cultural system.

- h. The participants will understand the surface behavior of politeness in classroom settings in each culture.
- i. The participants will understand the potential points of conflict due to cultural differences in politeness systems between the two cultures.

Objectives: Activity b and c of Procedure 22 - 24 above.

- a. The participants will understand the speech act of requesting and its relation to questions and commands.
- b. The participants will understand the structure of sentences used for making requests in the relevant Pilipino languages.
- c. The participants will understand the function words and particles related to requesting, and those which serve to mitigate the force of a sentence, in the relevant Pilipino languages.
- d. The participants will understand the use of differing vocative expressions in requests in the relevant Pilipino languages.
- e. The participants will understand the use of differing intonation contours in making requests in the relevant Pilipino languages.
- f. The participants will understand the distribution of allowable and polite responses to requests in the relevant Pilipino languages.
- g. The participants will understand the distribution of requesting in relation to the allowed content of the proposition in the request in the relevant Pilipino languages.
- h. The participants will understand the distribution of the variety in request forms in terms of the participants and setting of the speech occasion in the cultural setting of the relevant Pilipino languages.

- i - o. Similar objectives regarding the structure, distribution and use of the American English forms used in requesting, including modal verbs, question - imperative forms, the politeness particle, and the varying intonation contours.

Objectives: Activity c of Procedure 22 - 24 above.

- a. The participants will interact with members of each culture to practice polite request forms and responses in English and in the relevant Pilipino languages.
- b. The participants will interact with members of each culture to identify appropriate and inappropriate elements in situations involving requests and responses.
- c. The participants will interact with members of each culture to identify and practice the non-verbal behavior appropriate to request and response forms.

Implementing: Activity a of Procedures 22 - 24 above.

Staff: 1 lecturer, 2 other discussion leaders, all being ethnographers who specialize in cultural systems in the Philippines.

Participants: 30 Fifth grade classroom staff members, per meeting. (Supervisory personnel from language arts and social studies may also be included).

Including:

- (a) Master Teachers
- (b) Experienced bilingual teachers
- (c) Interns
- (d) Aides
- (e) Tutors



Events: (1) Lecture - Presentation of ethnographic study results concerning politeness in the Philippine and American cultural systems, covering the points in the objectives above. Audio visual aids will be utilized.

(2) Discussion groups for questioning and explanation in three small groups.

Time: 3 hours - 1 released Monday afternoon

1 1/2 hour lecture

1 1/2 hour discussion

Implementing: Activity b of Procedures 22 - 24 above.

Staff: 1 lecturer, 2 other discussion leaders, all applied linguists specializing in language systems of the Philippines and the U.S.

Participants: Same

Events: (1) Lecture - Presentation of request forms and responses in the relevant Pilipino languages and in American English.

(2) Small groups of 10 discussing data in both languages and recognizing appropriate and inappropriate usage.

Time: 3 hours - 1 released Wednesday afternoon

1 hour lecture

2 hours small group

Implementing: Activity - c of Procedures 22 - 24 above.

Staff: 2 community members highly aware of American English language and culture.

2 community members highly aware of Pilipino languages and culture.

Participants: Same, divided into two groups.

Event: Fifteen participants and two consultants, one from each background, will

- a. view video tape clips
- b. identify polite and impolite actions
- c. predict conflict situations
- d. suggest avoidance and repair strategies
- e. practice polite requests and responses in both languages
- f. focus on politeness in classroom setting and request forms common in teacher-student interactions.

Event 2: Test on facts and on applying facts to situations.

Time: 3 hours Saturday A.M.

2 1/2 hours group

1/2 hour paper and pencil test

Evaluation: Activity a,b,c of Procedures 22 - 24 above.

1. Short term: The training session will be considered successful if
  - a. 80% of the participants will be assessed as competent on check list of objectives by discussion leaders in Activity a.
  - b. 80% of the participants will be assessed as competent on check list of objectives by discussion leaders in Activity b.
  - c. 80% of the participants will be assessed as competent on check list of objectives by discussion leaders in Activity c.

- d. 80% of the participants will score over 70% correct on the factual information quiz administered at the end of Activity c.
- e. 80% of the participants will score over 85% correct on the situation assessment quiz administered at the end of Activity c.

2. Long Term: The training session will be considered successful if

- a. 80% of the participants will produce adequate lesson plans on this subject matter during Activity d, below.
- b. 70% of the participants will effectively request community assistance in planning and devising materials for the lesson, as determined by supervisor follow-up.
- c. 70% of the participants will be rated as effectively teaching the unit during the school year by their supervisors.
- d. 80% of the students of the participants will display competency of 80% of the performance objective for students relative to this material.
- e. 70% of participants will get 65% correct on 6 mo. post test.

3. Survey evaluations:

- a. Training staff members will report self-assessment of success and failures of training program activities.
- b. Participants will report evaluation of training on a questionnaire at termination of training.
- c. Participants will rank activities a, b, and c, of this training session in relation to others offered

by BBE, SFUSD and others they have participated in, along 20 dimensions specified by the BBE training staff on a questionnaire administered six months after the termination of the training session.

Activity d. will be a methods and materials workshop which will be held for participants of the above activities as well as participants of four similar training sessions related to implementing the curriculum. The participant total will be 150 divided into 10 small work groups, two of which will deal specifically with this material.

Activity e. will be a lecture - discussion session for the same 150 participants reviewing and integrating the material into the overall curriculum objective.

Activities d and e will have specific goals and objectives and implementation, and evaluation plans similar to those developed for Activities a,b,c above.

The BBE program planning and development activities will utilize the assessment and evaluation materials from all of the above activities to evaluate the program and revise development plans where necessary.

The BBE program staff will evaluate the outside and inside training resource effectiveness and use the evaluation in future decisions about training sessions.